

ABSTRACT

1 Apparatus for producing liquid or solid xenon comprises a duct 12 having an inlet
2 14 for receiving gaseous xenon and an outlet 16 for outputting gaseous xenon at a
3 reduced temperature to a nozzle located in a vacuum chamber 60. A housing 18
4 extends about the duct and contains a halocarbon coolant in thermal contact with
5 the duct, and a second duct 24 in thermal contact with the halocarbon coolant for
6 conveying a flow of liquid nitrogen through the housing 18 to control the
7 temperature of the halocarbon. In view of the difference in the pressure of the
8 xenon gas output from the duct and the pressure in the chamber, the thus-cooled
9 gas is caused to liquefy or solidify in the vicinity of the nozzle.